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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/772,140

02/04/2004

John E. Poniatowski

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EXAMINER

NGUYEN, TUYEN T

ART UNIT

PAPER NUMBER

2832

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/772,140

Applicant(s)

PONIATOWSKI ET AL.

Examiner

TUYEN T. NGUYEN

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 2, 10, 13 and 17-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-9, 11, 12 and 14-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-4, 6-9 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrett [US 5,737,203] in view of Kober [US 3,212,039].

Barrett discloses a transformer [figure 3A] comprising:

- a main magnetic core [42] having a center leg [48] and two outer legs [44, 46];
- a control magnetic core [42] coupled to the main core and having a center leg [48] and two outer legs [44, 46];
- a gap between the center legs of the main magnetic core and the control magnetic core;
- a main winding [50] wound about the center leg of the main core; and
- a control winding structure including a first control winding [54] and a second control winding [56] wound about the outer legs of the control core, wherein the first and second control windings formed of multiple turns.

Barrett discloses the instant claimed invention except for the specific configuration of the control winding.

Kober discloses a variable transformer [figure 3-7] comprising:

- a magnetic E-core [1] having a winding [12] wound about a center leg thereof and two other windings [15, 16] wound about the outer legs thereof; and

- a magnetic I-core [22] coupled to the center leg and two outer legs of the E-core.
- wherein one of the winding formed in figure eight configuration.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use figure eight configuration of Kober's winding for the control winding of Barrett for the purpose of controlling the inductance of the device.

Regarding claims 6-7 and 14-15, Litz wire is a known conductor for use in transformer/inductor.

Claims 3-5 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrett in view of Kober as applied to claims 1 and 9 above, and further in view of Spreadbury [US 3,686,561].

Barrett in view of Kober discloses the instant claimed invention except for the specific core structure.

Spreadbury discloses a magnetic device [figure 10] comprising:

- two magnetic E cores [156', 158'];
- a magnetic I core [152] disposed between the E cores;
- a non-magnetic spacer [160] disposed between the I core and one of the E core providing a gap between one of the E core and the I core; and
- at least one winding [182, 186] wound about the center leg of the E core.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use E-I-E core design of Spreadbury for the core of Barrett, as modified, for the purpose of regulating/controlling magnetic flux.

Response to Arguments

Applicant's arguments filed 8/14/2006 have been fully considered but they are not persuasive.

Applicant argues that:

[1] Barret in view of Kober do not disclose the control winding wound in figure-eight configuration; and

[2] Barret in view of Kober combination do not show the *turn-by turn control coil induced voltage operation in high magnetic flux density ranges*.

The examiner disagrees.

Regarding [1], Kober discloses a figure-eight control winding. A skilled artisan would have been motivated to use the figure-eight control winding of Kober's variable voltage transformer in Barret device for the purpose of controlling the inductance.

Regarding [2], applicant has not claimed, nor has examiner considered, any *turn-by-turn control coil induced voltage operation in high magnetic flux density ranges*. Applicant acknowledged the induced voltage canceling in Barret in view of Kober.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUYEN T. NGUYEN whose telephone number is 571-272-1996. The examiner can normally be reached on M-F 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ELVIN ENAD can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTN *TTN*

TUYEN T. NGUYEN
Primary Examiner
Technology Center 2800

Tuyen Nguyen